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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,335

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Erich Reitingner

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EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT

PAPER NUMBER

3743

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,335	Applicant(s) REITINGER, ERICH	
	Examiner Stephen M. Gravini	Art Unit 3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-12,14-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-12 and 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5-5-5 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 & 3-8, drawn to a method combination, classified in class 34, subclass 381.
- II. Claims 9-12 & 14-18, drawn to an apparatus, classified in class 34, subclass 78.
- III. Claim 21, drawn to a method subcombination, classified in class 34, subclass 397.

The inventions are distinct, each from the other because of the following reasons:

Inventions of groups I & III and group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be practiced by another and materially different apparatus or by hand because the group I & III claimed heat treatment is not a limitation in the group II inventions.

Inventions of group I and group III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed

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does not require the particulars of the subcombination as claimed because group III steps of conducting fluid from the wafer /hybrid holding device to outside a space and at least a portion of the fluid which has been conducted from the wafer/hybrid holding device to outside the space is used to condition the atmosphere within the space by being conducted back into the space are not limitations in the group I combination invention without the first, second and third lines of that combination. The subcombination has separate utility such as being a regenerative heat treatment process without separate lines.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after

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the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Newly submitted claim 21 is directed to an invention that is independent or distinct from the invention originally claimed for the reasons discussed above.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 21 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1 and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogami et al. (US 4,693,211) in view of Pabst (US 4,817,299). The claims are

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reasonably and broadly construed, in light of the accompanying specification, as being disclosed by Strodtbeck as comprising:

preparing a space which is at least partially enclosed by a container and has a wafer/hybrid holding device which is located therein and has the purpose of holding a semiconductor wafer and/or hybrid at column 3 lines 12-38; and

conducting a dry fluid through the wafer/hybrid holding device in order to heat-treat the wafer/hybrid holding device at column 4 lines 33-38;

said dry fluid being fed into the container and into said wafer/hybrid holding device via a first line and leaving said wafer/hybrid holding device and container via a second line at column 4 line 62 through column 5 line 2; or alternatively:

space **3** being at least partially enclosed by a container having a wafer/hybrid holding device which is located therein and has the purpose of holding a semiconductor wafer and/or hybrid;

a first line **12** via which the fluid can be conducted into the container and into the wafer/hybrid holding device from outside the space;

a second line **5** via which the fluid can be conducted from the wafer/hybrid holding device outside the space. Ogami also discloses the claimed space essentially enclosed by a container as shown in figure 1, characterized in that the portion is firstly heat-treated and then allowed to flow out within the space at column 2 lines 33-46, characterized in that the portion is heat-treated outside the space and then fed back to the space at column 3 lines 19-27, characterized in that the portion is allowed to flow out within the space directly after it leaves the wafer/hybrid holding device at column 3

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lines 41-56, characterized in that a first portion of the fluid leaving the sample stage is firstly heat-treated and then allowed to flow out within the space, and a second portion is allowed to flow out within the space directly after it leaves the wafer/hybrid holding device at column 3 line 61 through column 4 line 4, characterized in that at least one of the first and second portions can be regulated as a function of the flow rate at column 4 lines 39-44, characterized in that the portion is heat-treated in that it is used for pre-cooling, in particular for pre-cooling the fluid, outside the space before said portion is allowed to flow out within the space at column 4 lines 56-61. Ohtani discloses the claimed invention, as rejected above, except for the claimed step wherein at least a portion of the fluid having left the wafer/hybrid holding device is used to condition the atmosphere within the space by being conducted back into the container via a third line. Pabst, another semiconductor/wafer conditioning device, discloses that feature at column 6 lines 30-58. It would have been obvious to one skilled in the art to provide the teachings of Ohtani, with a third line portion path, as disclosed in Pabst, for the purpose of providing an efficient and cost effect means of controlling temperature and flow. Ogami discloses the claimed invention, as rejected above, except for the claimed step wherein at least a portion of the fluid having left the wafer/hybrid holding device is used to condition the atmosphere within the space by being conducted back into the container via a third line. Pabst, another semiconductor/wafer conditioning device, discloses that feature at column 6 lines 30-58. It would have been obvious to one skilled in the art to provide the teachings of Ogami, with a third line portion path, as

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disclosed in Pabst, for the purpose of providing an efficient and cost effect means of controlling temperature and flow.

Claims 10-12 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogami in view of Pabst in further view of Ohtani (US 6,099,643). Ogami in view of Pabst discloses the claimed invention, as rejected above, except for the claimed , wherein a temperature regulating device is provided between the second and third lines, characterized in that outflow elements are provided at the end of the third line characterized in that the line device has a first line via which the fluid can be conducted from outside the space into the wafer/hybrid holding device and a fourth line via which the fluid can be conducted from the wafer/hybrid holding device into the space, a second line via which the fluid can be conducted out of the wafer/hybrid holding device to outside the space and a third line via which the fluid can be fed back into the space from outside the space wherein a temperature regulating device is provided between the second and third lines, a heating device, temperature regulating device, and characterized in that the heat exchanger is used to pre-cool the fed-in fluid, characterized in that the line device is designed in such a way that the portion leaving the heat exchanger can be fed back at least partially into the space in order to condition the atmosphere, characterized in that a further line is provided via which dry fluid can additionally be conducted directly into the space from outside the space and characterized in that the space is essentially enclosed by a container. Ohtani discloses, wherein a temperature regulating device is provided between the second and third lines as shown in figure 10, characterized in that outflow elements are provided at the end of

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the third line as shown in figure 11, characterized in that the line device has a first line via which the fluid can be conducted from outside the space into the wafer/hybrid holding device and a fourth line via which the fluid can be conducted from the wafer/hybrid holding device into the space as shown in figure 11, a second line via which the fluid can be conducted out of the wafer/hybrid holding device to outside the space and a third line via which the fluid can be fed back into the space from outside the space wherein a temperature regulating device is provided between the second and third lines at column 3 lines 34-57, a heating device **82**, temperature regulating device **83**, and characterized in that the heat exchanger is used to pre-cool the fed-in fluid, characterized in that the line device is designed in such a way that the portion leaving the heat exchanger can be fed back at least partially into the space in order to condition the atmosphere, characterized in that a further line is provided via which dry fluid can additionally be conducted directly into the space from outside the space and characterized in that the space is essentially enclosed by a container at column 8 lines 31-50. It would have been obvious to one skilled in the art to combine the features of Ogami in view of Pabst with the teachings of Ohtani to provide the precise temperature and flow relations to allow optimum wafer/hybrid processing.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogami in view of Pabst in view of Ohtani in further view of Strodtbeck. Ogami in view of Pabst in view of Ohtani discloses the claimed invention, as rejected above, except for the claimed valve provided for regulating the flow rate of the fourth line. Strodtbeck, another semiconductor/wafer conditioning device, discloses that feature at column 8

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lines 31-50. It would have been obvious to one skilled in the art to provide the teachings of Ogami in view of Pabst in view of Ohtani, with a valve, as disclosed in Strodbeck, for the purpose of providing an efficient and cost effect means of controlling temperature and flow.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 571 272

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4875. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth B. Rinehart can be reached on 571 272 4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen Gravini/
Primary Examiner, Art Unit 3749